Saskatchewan
Agriculture

A Report Presented to the Saskatchewan Minister of Agriculture by the Saskatchewan Veterinary Services Review Committee

TABLE OF CONTENTS

Forward 1
Summary of Recommendations 3
The Necessity for Change 6
Delivery System of Veterinary Service 16
Diagnostic Pathology 25
Education and Continuing Education 27
Research 31
Veterinary Pharmaceuticals and Biologicals 32
Poultry 38
Meat Inspection 39
Auction Market Inspection 41
Veterinary Inspection of Community Pastures 42
Saskatchewan Society for the Prevention of Cruelty to Animals 43
Terms of Reference 45
Historical Perspective of Veterinary Services in Saskatchewan 46
Committee 50
Sources of Information and Consultants 51

FORWARD

The report of the Saskatchewan Veterinary Services Review Committee was prepared at the request of the Minister of Agriculture, Province of Saskatchewan. The report represents the Committee's best efforts at assimilation of the experience and knowledge of a diverse group of people. Of prime concern were ways of improving the economic viability of the food animal component of the Province's agricultural industry. Efforts of the Committee were directed toward distilling the most representative opinion of a very high percentage of those groups and individuals directly concerned with our Province's animal industry.

Many sources of information were utilized to obtain a thorough understanding of the current situation. Oral and written presentations received represented many hours of effort by people interested in enhancement of the livestock industry. The Committee wishes to acknowledge with appreciation the efforts of those Organizations, Associations, Boards and individuals who expended considerable effort with the hope of improving the lot of those engaged in the industry.

As the work of the Committee progressed, numerous features became clear. The current overall delivery system is not serving the industry at large, the individual livestock producers nor the society within which it functions, with the most economic and technically feasible veterinary resources.

The food animal industry is recognized as a major and integral component of the Province's total agricultural and industrial output. Preventable losses due to livestock disease and management related conditions has long been

recognized by many within the industry to be costing the Province's economy large, and unnecessary losses. Numerous rural communities and individual producers have not had reasonable access to the veterinary expertise and technology capable of being delivered.

Ways should be developed to enable and encourage the most economically efficient output from our food animal industry. Animal agriculture is recognized to have an important employment and job multiplier function in the Province's economy. It seems ironic and unfortunate that our livestock populations continue to decline at a time when Saskatchewan farmland is experiencing declines in organic content and continued soil degradation.

Over the past forty years, the veterinary delivery system has generally seen many changes. Changes include the situation where a one person veterinary practice provided essentially emergency service to a surrounding locale to the potential for a multi-person practice capable of providing more technically advanced service. It is now possible to deliver highly qualified professional and technical resources to an increasingly aware consumer of these services. For many reasons which surface in the report, this evolutionary process has not occurred uniformly throughout the Province. The study of the current situation indicates considerable concern is warranted if the Saskatchewan livestock industry is not afforded the opportunity to utilize current animal health knowledge and technological advances presently possible within the industry.

It is to this end that the efforts and recommendations of the Committee were directed.

SUMMARY OF RECOMMENDATIONS

A. Delivery System

1. Incentive rebate to the producer as a percentage of professional fees and herd health-herd management fees.
2. Universalize current clinic operating grant and phase out over a 5 year period.
3. Incentive funding for the hiring of additional veterinary manpower - a 5 year decreasing funding program.
4. Establish a loan fund with 8% interest and a 10 year payback agreement for veterinarians to buy existing publicly owned clinics or to establish a new clinic.
5. A Department of Agriculture review of the "Veterinary Services Information Network" Study and consider implementing a system of centralized laboratory information and networking.
6. Continuation of Veterinary Service District Travel Grants for 3 years and then cessation of payment.

B. Diagnostic Pathology

1. Faster reporting by computerization.
2. Personnel increases where necessary.
3. One person to supervise and coordinate diagnostic services.
4. Additional funding to provide in-depth on-farm studies of disease conditions.
5. Upgrading of virology and serology testing procedures.
6. More interaction between the Provincial Veterinary Director and pathologists.

7. Encouragement and funding of pathologists to attend conferences, seminars and continuing education courses.
8. Pathology service should be available seven days a week.

C. Education and Continuing Education

1. Establishment of a grant or loan fund to support and encourage graduate training of species and discipline specialists.
2. Encouragement of Saskatchewan Veterinary Medical Association members to take continuing education courses.
3. Encouragement of the Western College of Veterinary Medicine to educate students to be more in tune with today's livestock industry.
4. Retrospective study of graduates of the Western College of Veterinary Medicine.

D. Research

1. Level of funding doubled for agricultural and veterinary research.
2. Level of funding be considered over a long term.
3. Allocate funding to research in strategic areas.
4. Allocation committees to consist of people aware of what current technology has to offer.

E. Veterinary Pharmaceuticals and Biologicals.

1. No need to establish a centralized drug purchasing agency.
2. Review of generic drugs.
3. Establishment of a licensing system for retail outlets.
4. Review and update licensure for animal health supply outlets.

F. Poultry

1. Provide ELISA test capacity.
2. Poultry specialist personnel increases as necessary.

G. Meat Inspection

1. Evaluation of the present system.
2. Objective of assuring a high quality of food product for the consumer.

H. Auction Market Inspection

1. Department of Agriculture monitoring of the situation.
2. Seek and review cost-benefit information from other provinces.

I. Veterinary Inspection of Community Pastures

1. Department of Agricutlture monitor the need for such a program.

This report is intended as a blueprint for change in the veterinary delivery system for Saskatchewan for the next 10-15 years. The recommendations take into account the need for support for the livestock industry in the herd management area. While previous support systems have favored travel and individual animal medicine, it becomes clear that the most efficient use of public funds is when they are applied to improving herd production. A major review of this industry should be conducted in 10 years to ensure the goals of the livestock industry are being met, and that new industry initiatives are being served.

THE NECESSITY FOR CHANGE

During the course of the Committee's study, the deficiencies of the current veterinary delivery system in this Province became increasingly apparent. In spite of deficiencies, many producers and geographic areas expressed a substantial level of satisfaction with the availability of traditional veterinary service in acute care situations. The extensive polling of producer groups and other producer voices, such as rural municipal councils, repeatedly drew the Committee's attention to a number of problems common to many areas.

The problems have many faces.

The Committee recognizes the situation which exists and has existed for many years in the Province. Under the present delivery system of rural veterinary services, disparity exists in cost (and availability) of veterinary services between producers within and outside organized Veterinary Service Districts.

Within Service Districts, producers benefit from provincial funding through grants to the Service Districts, helping to defray travel costs of veterinarians. Producers outside of Service Districts receive no benefit from such grants. At present, approximately one third of all producers in the Province do not reside within a Service District. At the present time, a standard "Call to premises" fee is charged to producers by veterinarians within each Service District, regardless of distance a producer may reside from the veterinary clinic. Producers residing less than approximately fifteen miles from veterinary

clinics, in effect receive no benefit from the travel grants. This results in a situation, on a province-wide basis, where over half the producers are receiving no direct benefit from the current travel grant system. It would appear that a fairer system, whereby all producers were in a position to benefit from provincial funding, should be made available to producers.

Subsidization of travel costs tends to increase the number of miles veterinarians drive to provide individual animal services. Many of these individual animal services could be more adequately attended in a veterinary clinic. Travel time by veterinarians would be more cost effective when used to provide herd health-herd management services rather than individual animal services.

A similar disjointed situation exists with regard to clinic maintenance grants at present. Prior to 1983, only clinics within Veterinary Service Districts received a clinic maintenance grant. Private clinics (which serve 1/3 of the province) were built and maintained by private ownership. A change in the maintainance grant structure was made in 1983 to attempt to correct this discrepancy. Different levels of grants are now paid to clinics within Service Districts, clinics outside of Service Districts and clinics in Service Districts that did not receive any grants during construction. It would appear again that some standardization is desirable.

An extremely high percentage of producer groups in Saskatchewan from whom information was solicited prior

to preparation of this report indicated support for herd health-herd management initiatives. Producer groups indicating support include:

1. A majority of the Veterinary Service Districts and Rural Municipalities responding

2. Saskatchewan Pork Producers Marketing Board

3. Saskatchewan Dairy Producers Cooperative

4. Saskatchewan Cattle Feeders Association

5. Saskatchewan Stock Growers Association

6. National Farmers Union

7. Saskatchewan Sheep Breeders Association. Levels of public support to the food animal industry through the Veterinary Services Branch has been at a less adequate level when compared to other Western Canadian provinces. If the livestock industry of the Province is to fairly compete with the industries of neighboring provinces and other areas or countries, it is essential that the industry have available and use the most advanced technology possible.

The situation has persisted for many years and the results are viewed with concern by the Committee. This is brought into perspective by the following:

Provincial Veterinary Branch Expenditures and Livestock

	Budget	Cattle*	Hogs*
Alberta	$8.48 million	3,780,000	1,450,000
Manitoba	6.28 million	1,035,000	1,080,000
Saskatchewan	1.87 million	2,234,000	635,000

*Source: Statistics Canada 22-008

The Alberta cattle and hog numbers are approximately double those of Saskatchewan. Manitoba has half as many cattle, and twice as many hogs as Saskatchewan. It must be concluded that if the neighboring provinces are not overserviced (which Committee contact with them would indicate that they are not) the producers of this Province are not receiving equitable levels of provincially assisted service.

Our studies have indicated many areas of concern by producers and veterinarians alike in the availability and quality of species specialist and diagnostic services in the Province. A number of the most serious problem areas relating to the actual delivery of clinical and management services by veterinarians to food animal producers, are addressed in Committee recommendations. Diagnostic laboratory capabilities, education, research, continuing education and technology transfer were found by the Committee to be areas requiring urgent consideration.

Basic agricultural research is very important in maintaining a competitive edge for livestock producers. Often investment in research produces results five to ten years later, and for this reason often appears to become expendable when budget cutting is in vogue. Basic research appears to have difficulty in maintaining staff and interest in short term budgeting situations; therefore, joint federal:provincial agreements covering funding of

research should be made in long time frames of ten to fifteen years. The Committee recommends the province to continue support in livestock research. Livestock are a public resource and worthy of support in the same manner as our soils and water.

The veterinary delivery system in place has served the industry in the past on the basis of emergency services. As noted earlier in this Committee's report, there is widespread producer acceptance and request for expansion of herd health-herd management services. In the future, emphasis on preventive medicine and more efficient animal production requires an improved approach which would encourage and promote herd health activities.

It would appear that very large economic loss due to animal disease and death is occurring in the Province. This is not unique to Saskatchewan. The Committee believes efforts to reduce this loss can be expected to return many times the amount of funding spent in these efforts. To illustrate this point, Dr. T.L. Church, following a study of cow-calf operations in Saskatchewan in 1978, concluded "The cost of disease and death in adult breeding cows was estimated to be $32.00 per cow and calf in Saskatchewan; the principal loss is from sub-optimal reproduction.".

Further support of the above is illustrated by the following:(actual study by T.L. Church on 114 randomly selected Saskatchewan farms) " ... in Saskatchewan the average weaned weight of calves was estimated to be 338 lbs., whereas in the Federal-Provincial R.O.P. for Beef Cattle, 1980-81, the average 200-day adjusted weights

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The Committee considers reasonable an estimate that the introduction of enhanced herd health-herd management technology could increase the average weight of calf weaned by a minimum of 20 pounds per calf.

Approximately 570,000 calves are weaned per year by cow-calf producers and at a value of $.75 per pound, this would yield an increase of income to the producers of $8.55 million annually.

SASKATCHEWAN FARMS REPORTING CATTLE, 1976 AND 1981

Item	1976 Number of Farms	1976 Percent of Farms	1981 Number of Farms	1981 Percent of Farms	% Change + Increase - Decrease
CATTLE:					
Farms reporting	42,348	100.0	32,805	100.0	-22.5
1 - 2 animals	871	2.1	844	2.6	-3.1
3 - 7 animals	2,688	6.3	2,441	7.4	-9.2
8 - 12 animals	2,461	5.8	2,124	6.5	-13.7
13 - 17 animals	2,181	5.2	1,793	5.7	-17.8
18 - 32 animals	6,735	15.9	4,988	15.2	-25.9
33 - 47 animals	5,412	12.8	4,202	12.8	-22.4
48 - 62 animals	4,922	11.6	3,573	10.9	-27.4
63 - 77 animals	3,616	8.5	2,815	8.6	-22.2
78 - 122 animals	6,840	16.2	4,947	15.1	-27.7
123 - 177 animals	3,363	7.9	2,513	7.7	-25.3
178 - 272 animals	2,006	4.7	1,507	4.6	-24.9
273 - 527 animals	990	2.3	819	2.5	-17.3
528 animals and over	263	0.6	239	0.7	-9.1

Source: Statistics Canada.

TOTAL CATTLE AND CALVES ON FARMS, SASKATCHEWAN, CANADA AND SELECTED REGIONS, AS OF JANUARY 1, 1974-1981

	Saskatchewan		Prairies		Ontario		Canada	
	Number (000s)	% of Total	Number (000s)	% of Total	Number (000s)	% of Total	Number (000s)	% of Total
1974	2,627	19.5	7,736	57.4	3,245	24.1	13,481	100
1975	2,787	19.5	8,283	58.0	3,336	23.4	14,278	100
1976	2,795	19.9	8,215	58.5	3,252	23.2	14,048	100
1977	2,645	19.3	7,981	58.2	3,212	23.4	13,710	100
1978	2,333	18.1	7,391	57.4	3,005	23.4	12,870	100
1979	2,173	17.6	6,986	56.7	2,920	23.7	12,328	100
1980	2,167	17.5	6,962	56.1	2,940	23.7	12,403	100
1981	2,095	16.8	6,850	54.9	3,030	24.3	12,468	100

Source: Statistics Canada.

SASKATCHEWAN CATTLE NUMBERS - JANUARY 1,1986

Total:		1,750,000
Beef Cows:		760,000
Beef Heifers:	Replacement	111,000
	Slaughter	43,000
Milk Cows:		77,000
Milk Heifers:		17,000
Bulls:		37,000
Steers:		110,000
Calves:		590,000

Source: Statistics Canada

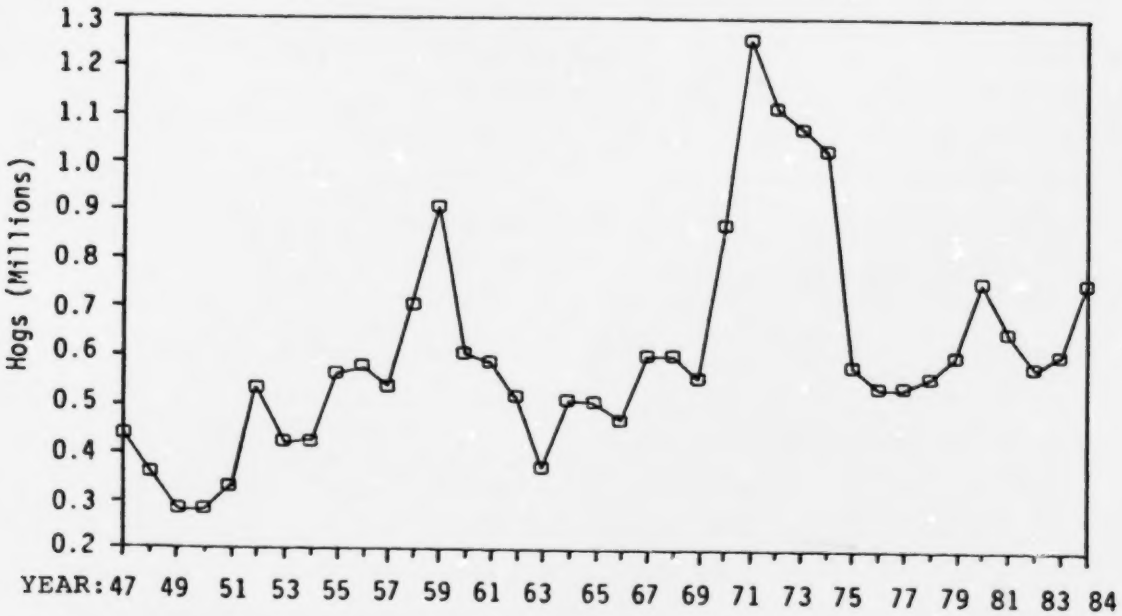
The province's hog industry is similarly in a position to increase market value resulting from improved efficiency . It is estimated that, at present production levels, a 5% increase in productivity would increase the market value of hogs by approximately $1.2 million per year.

SOWS BY PROVINCE, 1976 AND 1983
(Thousands)

	Maritimes	Quebec	Ont.	Man.	Sask.	Alta.	B.C.	Canada
1976	23.1	154.5	216.4	64.3	51.4	86.5	6.7	602.9
1983	45.1	320.0	390.0	103.0	61.7	130.0	28.0	1077.8
Percent Increase	95.2	107.1	80.2	60.2	20.0	50.3	317.9	78.8

Source: Handbook of Selected Agricultural Statistics, 1984, Published by Agriculture Canada.

SASKATCHEWAN HOG PRODUCTION, 1947 TO 1984



SASKATCHEWAN HOG NUMBERS - JANUARY 1, 1986

Total:	660,000
Sows & Gilts:	68,000
Boars:	5,400
Weanlings & Feeders:	
45 lbs.	210,000
45 - 130 lbs.	226,600
130 lbs.	150,000

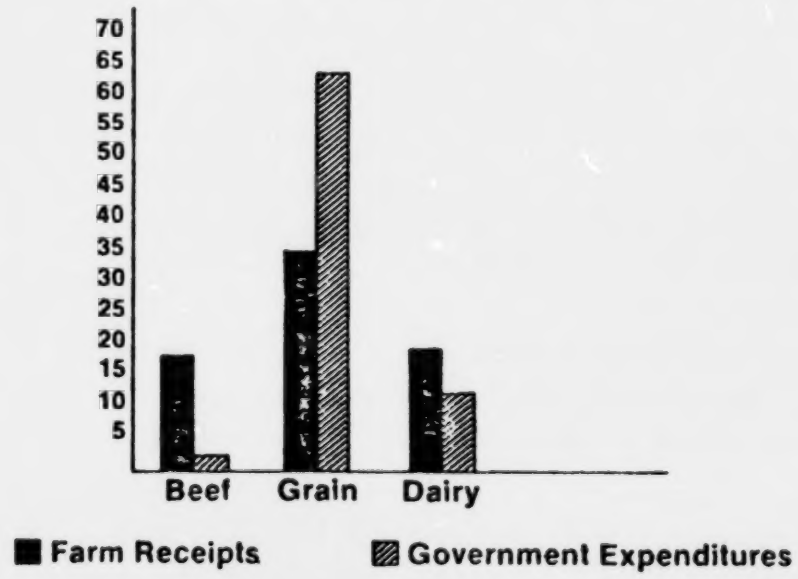
Source: Statistics Canada

The dairy industry of the Province is also in a position to improve productivity with improved efficiency. Magwood's report states: "Thompson examined the possible impact of improved technology on the agricultural resources used for dairy farming in Canada. A national average per cow of 4,850 litres (5033 kg.) per year could be attained by improved feeding methods, reduction of calving intervals and artificial insemination." The average production at the time of the study (from 1981 Census) was estimated to be 4502 kg. Using this information as a reference, the Saskatchewan dairy herd of 77,000 cows could be expected to increase production value by approximately $10.7 million annually using improved technology.

"In food animal practice, health and productivity are synonymous and the measurement of productivity is the measurement of health." (N.O. Nielson, DVM, PhD, Former Dean, Western College of Veterinary Medicine, University of Saskatchewan in "Opportunities and Constraints in Changing the Food Animal Curriculum").

"Animal health programs must have support from the people affected if they are to succeed. To get this support we need good scientific information freely communicated. We need candor in discussion of limitations of knowledge. The program must be shown to be of economic benefit to the people as a whole - though not necessarily to all segments. And political and economic realities must be recognized." (Communication, Cooperation and Change, Dr. J.K. Atwell, Administrator of Veterinary Services, Inspection Service, U.S.D.A.).

Percentage of Farm Receipts vs Government Expenditure



Source: Agriculture Canada

DELIVERY SYSTEM OF VETERINARY SERVICES

The Committee feels all recommendations are integral and critical to the development of a total herd health and management package for producers. These changes to the delivery of veterinary services are an incentive to improved production. The need to achieve standardization of the delivery of veterinary service is critical. The recommendations are intended as a package, and are intended to shift the emphasis from individual animal care to herd health management programs. The Committee realizes this cannot be done immediately; therefore, phase in and phase out implementation is crucial to the success of the program. The goal is the enhancement and satisfaction of the livestock industry.

Recommendations:

1. **Incentive rebate to the producer as a percentage of professional fees and herd health-herd management fees.**

There was a very strong and positive response from producer groups and producer representatives advising institution of herd health-herd management programs. The incentive rebate would be based a percentage of a specific number of visits per year.

The number of visits funded per year, the minimum number of head required by the producer, and the incentive rates would be as follows:

Species	Visits/Yr	% Reimbursed	Herd/Flock Minimum
Swine	6	50	Sows-10 purebred or 20 commercial or 300 pigs sold per year
Cow/Calf	2	50	15 cows
Feedlot	3	50	50 head
Dairy	12	25	20 milking cows
Horses(PMU)	2	50	as per PMU contract
Sheep	2	50	25 ewes

Farm visits would include both mileage and professional fees. Pharmaceuticals and supplies would not be included. All post mortems would be reimbursed at the 50% rate, but there would be no allowances for mileage. Feed Testing would be reimbursed at a 50% rate for two yearly sample packages with four samples per package. Semen testing of bulls would be reimbursed at the 50% rate on all bulls tested.

The producer is responsible for paying the entire veterinary bill. The producer, upon forwarding his receipt to the government, would be issued his incentive rebate.

In all programs, there is a necessity to insist on accurate and complete record keeping systems. It is recommended that base line information on each production unit be recorded at the initiation of the program. By monitoring production records, the producer and his veterinarian will be able to evaluate progress and be alerted to potential problems as they arise. Provincial averages could be maintained to show the results of the program in future years. The program should be maintained for a minimum of ten years with a major review recommended at the end of the first five years.

The following are some major quotes designating herd health and production management as target areas for the introduction of a revised system in the delivery of veterinary medicine in Saskatchewan:

Magwood, 1983: "The loss from management-responsive disease and impaired reproduction is incalculable - probably in the order of a billion dollars annually in Canada - the lack of involvement justifies substantial and coordicated effort to reduce it."

"provide incentives to producers and veterinarians to develop health management programs for Saskatchewan herds" Western College of Veterinary Medicine

"Both Church and Magwood stated that public funds were needed to support Herd Management programs." Saskatchewan Veterinary Medical Association

"A long term objective should be to encourage widespread use of a preventive medicine program by producers in a high herd health mode. The savings in terms of reduced drug costs and increased productivity would generate savings sufficient to pay for this service." Saskatchewan Pork Producers Marketing Board

"Based on opinions expressed, there is a real interest in producers in preventive medicine. The Herd Health program in place in this province at one time was well received at that time." Dairy Producers Cooperative

"There is a definite feeling among our members that some type of regular herd health program is becoming more and more important and necessary." Saskatchewan Cattle Feeders Association

"We are very positive and supportive toward institution of programs for herd health; it should be a lot cheaper than curing animals." Saskatchewan Stock Growers Association

"Producers are saying, "Increase the support to Herd Health programs." National Farmers Union

"Producers have a positive attitude to preventive medicine and herd health." Rural Municipality of Great Bend No. 405

"Production records are the key to the system - establish baselines, identify problem areas and measure progress." A.R. Hingston, Saskatchewan Department of Agriculture

"major emphasis should be on a total health care package, which would entail regular veterinary visits" W.C. Weir, Past Director, Saskatchewan Veterinary Branch.

2. The phasing out of the clinic operating grants.

The Committee recommends that the current clinic operating grant program be universalized (i.e. paid to all clinics in the Province, whether public or private) and phased out over a period of five years. Grants would be available to clinics providing service to a predominantly food animal practice.

Grant structure:

Years 1 and 2	$3,000/year
Years 3 and 4	2,000/year
Year 5	1,000/year

The grant would be paid to the owner of the clinic.

Estimated costs to the Saskatchewan Department of Agriculture:

Years 1 and 2	$168,000/year
Years 3 and 4	112,000/year
Year 5	56,000/year
Total	$616,000 for 56 clinics over 5 years.

Payment of grants would be dependent on a facility maintaining certification under the Clinic Certification Program of the Saskatchewan Veterinary Medical Association.

3. Incentive for the hiring of additional veterinary manpower.

The Committee recommends an incentive for veterinary practices to hire an additional veterinarian beyond the usual number in the practice. It is recommended that the incentive be in the form of a 5 year decreasing grant paid directly to the veterinary clinic or practice. The funding recommended is as follows:

Years 1 and 2	$10,000/year
Year 3	7,500
Year 4	5,000
Year 5	2,500

This will be a one time grant per veterinary clinic or practice. It is also recommended that the program have a 10 year life span, with initial participation available at any time during the 10 years.

The grant is recommended with the express purpose of:

i freeing at least one veterinarian to schedule herd health work without being responsible for emergency calls at the same time.

ii allowing one veterinarian to be at the clinic to provide service while the other is in the country.

iii increasing the expertise in necessary areas of herd/flock management and hopefully specializing to some extent.

iv allowing time for upgrading programs.

v encouraging organization and attending of producer meetings for the purpose of improving herd/flock health management.

vi allowing attendance at veterinary specialty conferences to improve herd/flock health management knowledge.

vii assisting the provincial government in collecting samples which may be necessary to provide a disease and/or nutritional monitoring system for the province.

In Saskatchewan, there are approximately 65 practices that are mixed or large animal oriented - if 20 of these added staff, the projected cost would be:

Years 1 and 2	$200,000/year
Year 3	150,000
Year 4	100,000
Year 5	50,000
Total	$700,000

The Committee foresees this cost being spread out over a longer period of time, as there would likely not be full program participation at the onset.

4. A loan for veterinarians to buy existing publicly owned clinics or to establish a new clinic.

The Committee recommends that a loan be made available to veterinarians who wish to purchase publicly owned veterinary clinics where desired by Veterinary Service District Boards and veterinarians. It is recommended that an 8% loan program with a ten year payback agreement be made available to veterinarians purchasing a publicly owned clinic or to veterinarians establishing a new clinic. Veterinarians wishing to use the fund to build new clinics would have to show that it would reasonably be expected to serve predominantly food animal producers. As long as the loan is outstanding the facilities must be used as a veterinary clinic.

Positive effects of this program would include standardization and reduction of tax load on Rural Municipalities (by eliminating the cost of maintaining veterinary clinic facilities).

5. A Department of Agriculture review of the "Veterinary Services Information Network" Study and consider implementing a system of centralized laboratory information and networking.

There is a great need to facilitate the transfer of information between the private veterinary practitioner in Saskatchewan, the Western College of Veterinary Medicine, the Provincial Diagnostic Pathology Laboratories, and the livestock producers.

As it now exists, this transfer takes place by mail, telephone, or word of mouth. The weak link in diagnostic information very often is the time required to transfer the diagnosis from laboratory to veterinarian to farmer. A network of computers across the province (not unlike that now underway in the Department of Agriculture) would greatly improve the communication link. Some of the advantages would be:

1. Transfer of pathology reports from laboratories to veterinary offices.
2. Tabulation of disease situations across the province.
3. Communication between the College of Veterinary Medicine and practitioners concerning new techniques and methods of combating disease.
4. Giving veterinary practitioners in Saskatchewan microcomputing ability within their own office for business and medical purposes.
5. Give producers, through their veterinarian, access to herd health programs that will improve their efficiency of production.

The Committee feels this is a very important step in the development of the delivery of veterinary medicine, and has authorized the Systems Division of the Department of Supply and Services to do a survey of the province in respect to developing a veterinary computer network system. Their report will follow in an addendum to the main report.

The Committee recommends the government review the survey, and consider implementing the networking program. A veterinary network aimed at practitioners in Saskatchewan may need financial incentive in the initial years to ensure enough participation to be viable.

6. Sunset Provision for Veterinary Service District Travel Grants.

The travel grants should be continued at the present level for three years. They would then cease to be paid.

Travel grants tend to bias the delivery system towards individual animal medicine and away from herd management procedures. It is the Committee's opinion that greater value is achieved by support of herd health programs. Public money should be spent on increasing the efficiency of production, i.e. herd health programs, rather than individual animal health problems. In the herd health program being recommended, a mileage provision exists for delivery of on-farm herd health programs.

It is anticipated there will be a lag phase before establishment of a herd health system. Three years of travel grants to Veterinary Service Districts should be continued to facilitate change from the existing situation to a program targeted at herd management.

Inequities will be reduced. Subsidization of herd health systems will be equal to all. Boundaries which are discriminating to producers who want to select the veterinarian of their choice without penalty would effectively be eliminated.

Veterinary Service District Boards should be encouraged to continue as in the past. Local input from boards is essential. Their help and expertise is required to monitor the new systematic approach to animal management and advise government and regulatory bodies (eg. Saskatchewan Veterinary Medical

Association, Saskatchewan Department of Agriculture). Local input is essential to success in the changes of delivery of veterinary services in Saskatchewan.

DIAGNOSTIC PATHOLOGY

There must be a major increase in expenditure in this area. It is the purpose of veterinary medicine to reduce losses and increase productivity in livestock. More service is required in times of reduced profit margins. The laboratory provides information. Information can effect rapid diagnoses in the field. Armed with information, veterinary practitioners and producers can institute disease treatment therapy and herd preventive medicine which are vital in decreasing livestock losses.

Major concerns have been expressed by pathologists, producer groups, and veterinarians on improvement of the speed of reporting, the quality of diagnostic work, and coordinating of laboratories to function as a unit.

Recommendations:

1. Faster reporting by computerizing diagnostic reports and entering them on a computer network system is a future consideration. Quick direct access to veterinarians is the key to quick response in herd management by the producer.
2. We consider the personnel presently involved in the diagnostic area of such a small number that we are close to losing the critical mass of people necessary to provide and maintain adequate diagnostic capability in Saskatchewan. Lack of

species specialists is becoming an increasingly important deficiency. Saskatchewan is behind other major livestock producing provinces in maintaining a nucleus of veterinary experts.

3. A person to supervise and coordinate both laboratories would be essential. Common protocols and objectives with a minimum duplication of services is needed.
4. Funded positions for in-depth on-farm studies in cases of problem diseases or premises would improve the diagnostic capability of the laboratories. More emphasis must be placed on herd or flock problems.
5. Virology and serology testing procedures should be upgraded. A system of disease monitoring is required to allow better evaluation of disease management necessities in different areas of the province. New technology such as ELISA testing for evidence of disease exposure in farm animals should be instituted and is now in demand by some producer groups. If Saskatchewan does not improve virology and serology testing it should make arrangements to access centres that do.
6. More frequent interaction between the Provincial Veterinary Director and pathologists to know needs, resources, and direction of veterinary medicine in Saskatchewan is required.
7. Pathologists should be encouraged and funded to attend conferences, seminars, and continuing education courses to remain current with the enormous volume of scientific material being published.
8. Pathology service should be available seven days a week.

EDUCATION AND CONTINUING EDUCATION

The Committee believes there is a significant difference between the rate of new technology development and the rate of technology utilization by Saskatchewan livestock owners. This discrepancy is seen in all sectors of the industry and varies markedly from owner to owner. To illustrate this point, pregnancy testing of cows has been encouraged for approximately 15 years and its benefits substantiated; however, we believe only 30-35% of the cows in the province are pregnancy examined annually.

The Committee believes a major reason for this discrepancy in technology usage is the deficiency of information and knowledge and their application at all levels, especially at the producer level. This may also apply to the veterinarian and other advisors of the farm. Therefore, it is essential the Department of Agriculture put in place mechanisms which enable learning to occur.

A. Producers

Many livestock producers have difficulty recognizing the production loss in their herds and are inadequately informed of the technology available to increase production. In order to improve this situation, the Committee believes an improved delivery system for Veterinary and Animal Science Technology to the livestock industry is required. The Department of Agriculture should employ individuals trained to deliver extension and consultive services in areas such as nutrition, reproduction, and livestock management.

These people must be able to go to the farm and apply the necessary knowledge directly to it. They could encourage the development of small (10-15 people) livestock producer groups to work with and demonstrate advanced technology.

An innovative approach to this problem was taken by Dr. D.A. Christensen in his brief to the Committee and is quoted below.

"Design of an Improved Delivery System for Veterinary and Animal Science Technology to the Livestock Industry

The general principles that should be included in an improved technology (extension) delivery system include:

1. The delivery structure should be independent of provincial programs and political influence.
2. It should be independent of the academic core of the University. The program should be supported by a highly specialized and technically advanced core located at the University.
3. The regional extension offices should be linked administratively to the specialists at the University. The regional centers (6) should be designed to provide a complete clinical agriculture program including veterinary services. The number of agricultural representative districts should be reduced from the present 43 to not more than 20-30. They should continue to be administered by the Saskatchewan Department of Agriculture with emphasis on policy and program delivery and a minor emphasis on extension. They would

coordinate their activities with the University core specialists and regional clinical teams but would be administered separately by the provincial government.

4. The administration of the University core specialists and the regional centers should be independent of both the University and the provincial government. There should be major directional input by the Deans of Agriculture and Veterinary Medicine, by the Deputy Minister of Agriculture, by the Deputy Minister of Continuing Education and by farmer representatives from the regional councils. Funding would be by the provincial Departments of Agriculture and Continuing Education. The University core specialists could be involved in a limited amount of teaching, including clinical courses taken for credit by students in the College of Veterinary Medicine or in post-graduate programs designed for veterinary students. It would also include teaching in clinical courses in the College of Agriculture and in the three year diploma program.

5. The veterinary content of the regional offices should be greatly increased. A minimum of one and possibly two specialists should be provided in each regional office. They would be responsible for health service programs related to long term management and health problems and would provide services which cannot profitably be provided by veterinarians in commercial practice."

There should be some strong stimulus to encourage producers to become more knowledgeable. As an example, financial resources could in part be dependent upon demonstration or obtaining up-to-date knowledge of the particular livestock production enterprise being embarked upon.

B. Veterinarians

The Committee heard concerns expressed by livestock associations about the lack of basic understanding of production problems and their industry by veterinarians. Several associations also questioned: "How current are our veterinarians?" This concern has also been apparent to the Veterinary Colleges and was expressed by former Western College of Veterinary Medicine Dean N.O. Neilsen: "Present and increasing sophistication of livestock producers will compel veterinarians to undertake graduate or continuing education for the purpose of becoming more specialized. This will occur by species or class of livestock." (Opportunities and Constraints in Changing the Food Animal Curriculum).

Recommendations:

1. The establishment of a grant or loan fund to support and encourage graduate training of species and discipline specialists. Public funding should be used to support 3 post-graduate positions at the Western College of Veterinary Medicine to encourage veterinarians to take advanced training in speciality areas. The support should be $17,000 to $20,000 per position per year to make it possible for veterinarians with the necessary background and experience to pursue these courses. In

order to provide total herd management advice, there should also be support for animal scientists, agricultural engineers, etc. These programs should require a committment by those taking part in such a program to remain in the industry or institutions of the Province for a specified period of time following completion of their further training.

2. The Saskatchewan Veterinary Medical Association support and encourage its members to take continuing education courses to inform food animal veterinarians of industry production problems and recent changes in technology.

3. The Western College of Veterinary Medicine educate students so the graduates are more in tune with various aspects of the livestock industry and their production problems. This is especially important because of the increasing number of applicants to the College that have no animal-related experience.

4. A retrospective study of graduates of the Western College of Veterinary Medicine be done. We need to know if money spent in this education is well spent.

RESEARCH

Research, both applied and pure, in herd management and the animal diseases seen in Saskatchewan livestock is imperative. The funding of research must be considered over a long term as major investigations frequently require 5 to 10 years. "Studies show that the return on investment from

agricultural research is higher than return on investment from almost any other enterprise, and yet governments, both provincial and federal, have been slow to increase their level of investment in agricultural research." (Dr. S.D. Acres, Veterinary Infectious Disease Organization, Saskatoon, Saskatchewan)

Saskatchewan's livestock industry, to be world competitive, must be near the front of new technology and to be there, we must promote young veterinarians to undertake research as a career. This is another very important reason for public funding to support the three post-graduate positions at the Western College of Veterinary Medicine described previously. Some of the people taking these programs could be expected to branch into research as a career.

Recommendations:

The Committee recommends that the level of funding be doubled for agricultural and veterinary research. The funding should be allocated to research in strategic areas. The allocation decisions should be made by people aware of what current technology has to offer.

VETERINARY PHARMACEUTICALS AND BIOLOGICALS

Veterinarians in large animal practice in Saskatchewan use and depend on pharmaceuticals daily in the treatment and care of livestock. Pharmaceutical and biological sales in Saskatchewan in 1984 totalled $6.62 million (at the distributor level), with sales to veterinarians accounting for 62% of this total (Animal Health Institute Report,

1984). Sales of pharmaceuticals and biologicals have been increasing steadily across Saskatchewan for the last decade, and it is useful to look at some of the major influences on this trend:

1. The trend to larger, more intensive livestock units increases the probability of disease outbreaks; therefore, there is the necessity for rapid diagnosis, treatment and prevention programs.

2. Research and technology are continuously providing more drugs of better quality to prevent and treat diseases. The increase in variety and efficacy often increases the application of drugs.

3. New disease and deficiency states in livestock are being recognized and the pharmaceutical industry has made a commendable effort towards providing products to deal with these new situations.

4. Genetically superior animals that have a faster growth rate show deficiencies sooner and new techniques have evolved to support this accelerated performance.

Many producer groups polled by this Committee felt the cost of drugs was high. Drugs are one input cost producers feel regularly and may stand out in their mind larger in importance than they warrant. The view was also expressed that while drug costs may seem high, any cost seems high when the margin of profit is low. In 1977, a plan to provide centralized purchasing of pharmaceuticals for veterinarians was studied. The concept followed the centralized plan of purchasing that Manitoba has in existence. The 1977 study concluded that savings to

producers could not be realized due to the high administrative costs of such a center. Presently veterinarians have access to at least two centralized purchasing agencies - Western Drug Distribution Center - Edmonton, Alberta and C.D.M.V. (Center de Distribution de Medicaments Veterinaire) - St. Hyacinthe, Quebec. The Committee feels there is no need for the province to consider the establishment of a drug center in Saskatchewan at this time. Savings in drug costs will accrue from better herd management, and closer working relationships of producers and veterinarians to minimize misuses of medications.

There is increased interest in generic drugs as a way of reducing costs. The Committee is concerned that allowing generics into the market not be done at the expense of research into new problems by mainline companies. More work is needed to establish if real savings from generics is possible.

The transfer of information and knowledge concerning new pharmaceuticals and biologics is viewed by the Committee as being somewhat haphazard. Veterinarians in Saskatchewan have prevented themselves from advertising through the by-laws of their Association. This is done to protect the public from misleading advertising concerning professional services and cures for diseases which the public may not be able to properly assess. While the Committee shares the concern of the Saskatchewan Veterinary Medical Association on misleading advertising, it is also concerned about the right of the producer to obtain information about products that will help to increase the efficiency of production.

The British Veterinary Medical Association has permitted its members to advertise certain products only, to solve this dilemma. The products allowed are defined as "Management Tool Drugs" and are those drugs which are felt to generally improve management and/or efficiency of production if implemented. Drugs requiring a diagnosis for their application are not allowed to be advertised, since encouraging their use without a proper diagnosis would be to encourage misuse. The Committee feels all outlets for pharmaceuticals and biologics should be governed by this guidepost in order to bring rational standards to the advertising of drugs.

The Committee received many briefs concerned with the residues of antibiotics and other adulterating substances in meat and poultry. Consumer concern with the safety of foodstuffs is an important issue facing the livestock industry across North America. The response the industry takes to this issue could very well dictate future consumption patterns for red meat and poultry. Consumers are becoming increasingly aware of the potential health risks if proper withdrawal times of antibiotics or growth promotants are not observed, and will either demand residue free meat, or stop consuming meat as a large part of their diet. In Saskatchewan, control of the sale and distribution of pharmaceuticals and biologics is not supervised beyond the restriction on sale of prescription drugs (Health and Welfare Canada: Food and Drug Directorate/ Schedule F1/F2). The Committee feels there are two standards of safety to be met:

1. Producers: Producers should be assured that when they purchase animal health supplies the people with whom they deal are knowledgeable in what they are selling. The dealer must know applications for which the drug is intended, perhaps more importantly, for which it was not intended, and the proper withdrawal times to be observed. Producers do not have these assurances in Saskatchewan. Indeed, many retailers of pharmaceuticals on the non-professional, or "lay" side of the industry use drugs as a loss leader to attract traffic flow, and have little interest or knowledge in the drugs per se. The handling and retailing of drugs is far too important and potentially dangerous to be left to such a cavalier attitude. Producers lose by purchasing drugs they may not need, or purchasing the wrong drug for the condition and not obtaining the expected response.

2. Consumers: Consumers of meat and poultry need the assurances that responsible drug use in livestock is being followed. Lobbies in North America and Europe have indicated if these assurances are not met, they will push for restrictions on all drugs used in livestock. These restrictions, if legislated, would add greatly to the producer's cost of raising livestock.

The Committee feels the province needs to establish a system of licensing retail outlets for livestock drugs to ensure producer and consumer safety concerns are being met. Such a system would incorporate the following criteria:

1) Grades of licensure be established which indicate various levels of knowledge and expertise, and which specifically indicate the type and class of pharmaceutical that each business may sell.
2) An annual license fee be instituted.
3) The license be non-transferable to other people or places of business.
4) A system of fines for non-compliance be established.

Recommendations:

1. The Committee recommends that the Province not consider the establishment of a centralized drug purchasing agency for animal health supplies.
2. The Committee recommends that the Province undertake a review of generic drugs to determine their true cost:benefit ratio.
3. The Committee recommends that the Province establish a licensing system for retail outlets of animal pharmaceuticals and biologics.
4. The Committee recommends that the Province establish a board to review and update licensure for animal health supply outlets. This board should be comprised of representatives from the following organizations:

    1) The Saskatchewan Pharmaceutical Association
    2) The Saskatchewan College of Physicians and Surgeons
    3) The Saskatchewan Veterinary Medical Association
    4) The Saskatchewan Department of Public Health
    5) The Saskatchewan Department of Agriculture.

POULTRY

The poultry industry in Saskatchewan is an important but relatively small segment of the food animal industry (e.g. Saskatchewan share of Canadian Total Chicken Quota is 2.91%).

Saskatchewan's poultry industry consists mainly of two types of producers. Large commercial broiler, egg and turkey operations which require relatively intense management and disease surveillance practices to expect long term success, and many "farm flocks". Saskatchewan has almost one third of the "farm flocks" in Canada - flocks of less than 500 birds.

The two types of operations have somewhat differing veterinary requirements. Owners of small flocks mainly rely on information from a Veterinary Diagnostic Laboratory or from veterinary practitioners. Veterinary practitioners are providing much of the diagnostic services to small farm flocks; however, the economics may not be apparent to either the owner or the veterinarian.

Owners of large commercial poultry operations require a more intensive disease control program. A satisfactory program should include the laboratory capacity for current technology such as ELISA testing for flock profiling of hatchery supply flocks. Should significant expansion of the industry occur, consideration would need to be given to increasing poultry specialist personnel.

The funding presently directed towards services for the poultry industry is at least proportionate to the level of services directed at other food animal segments as a percentage of value of output.

"An Avian Virology Laboratory should be a high priority item." Saskatchewan Chicken Marketing Board.

It would seem unlikely, given the relatively small size of the industry in Saskatchewan, that the poultry industry could support private initiative in these service areas.

Recommendations:

1. The Committee recommends that serious consideration be given to providing, through the Diagnostic Pathology services or other appropriate facility, ELISA test capacity. It should be pointed out that this test capacity has application to requirements of other food animal sectors.
2. A modest increase in poultry specialist personnel should be considered given any significant increase in the Province's poultry output.

MEAT INSPECTION

No change is being recommended in the level of funding at the present time.

It is apparent that many inequities exist and there is a great variance of standards required in the slaughter, processing, and sale of meat products in Saskatchewan.

Evaluation of the present system is necessary. Requirements of abattoirs, processors, and retailers should be examined and changed through judicious changes in laws and by-laws governing the industry. The following table provides an overview of the present variety of abattoirs and meat processing plants in Saskatchewan:

A. Federally Inspected Abattoirs/Processors

-health/sanitation inspection provided by federal inspectors and veterinarians

-and ship interprovincially and export to other countries

-must have labels certified with federal inspection legend

-can have no retail counter

B. Domestically Inspected Abattoirs

-health/sanitation inspection provided by federal inspectors and veterinarians

-can sell product in province only

-carcasses and cuts of meat stamped with domestic inspection legend

-cannot sell to Federally inspected

-establishments because there is no export allowance for domestic inspection

-can have a retail counter

C. Public Health Inspected Abattoirs/Processors

- no veterinary inspection provided
- all abattoirs/processors must purchase annual public health license
- most small abattoirs are in this catagory
- some have a retail counter.

Regulations under which abattoirs, processors and retailers operate should be examined with a view to improving the situation the Committee believes to exist. It is recommended that an in-depth study should be undertaken for the purpose of gaining a thorough understanding of the meat handling industry.

The Committee would support an objective of assuring a high quality of food product for the consumer which is free of contamination, adulteration and chemical residues.

AUCTION MARKET INSPECTION

The Committee discussed the merits of re-instituting a program of veterinary inspection of all livestock offered for sale through the Province's auction markets. An inspection program was in effect previously (1971-1976). Although experiencing some success, the program was discontinued at that time when Provincial funding was withdrawn.

At the present time there is no indication the livestock industry considers such a program to be

required. It must be borne in mind, however, that increasing emphasis on herd health and herd management may create more awareness on the part of producers regarding the potential for introducing diseases into herds or flocks.

Recommendation:

The Department of Agriculture should monitor the situation and remain current as to the needs of the industry. Cost-benefit information that may be or may become available in other provinces with veterinary inspection of auction facilities should be sought and reviewed.

VETERINARY INSPECTION OF COMMUNITY PASTURES

This topic was addressed by the Committee as the result of some concern expressed in several areas.

These areas include the argument that more efficient use of a public resource would be made by limiting access to Community Pastures of ill or diseased animals. Publicly underwritten costs of these pastures is substantial. It may well be that public funds used to support more efficient use of this public resource would be a wise investment; however, the Committee was unable to obtain reliable cost-benefit information on this item.

The humane aspects of permitting animals with identifiable disease and other conditions should also be a consideration. The extensive pasture management system in these situations reduces the likelihood of adequate attention should a disease or other problem occur.

Community pastures create community opportunities to spread disease. It must be further added that exposing otherwise healthy animals to diseased animals is not an easily supportable situation.

While the Committee does not recommend that a comprehensive pasture inspection program be instituted, it is recommended that it would be prudent for the Department of Agriculture to monitor the need for such a program.

SASKATCHEWAN SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS (S.S.P.C.A.)

No recommendations have been made to change present funding.

The S.S.P.C.A. provides a valuable service. It is the only agency in Saskatchewan that has any real influence on producers in relation to cruelty or abuse of food producing animals. R.C.M.P. are not always capable of assessing validity of complaints regarding livestock.

The S.S.P.C.A. operates out of a small office at 518 Avenue K South, Saskatoon, Saskatchewan, with a full-time General Manager, a part-time secretary (two half-days a week) and an inspector who is called in as required on a fee-for-service basis.

Most complaints about animal abuse, inquiries, communications, etc. are received by telephone from all over the Province of Saskatchewan. Urban pet problems are referred directly to the appropriate local Humane Society. The complaints about perceived animal suffering/abuse may be dealt with in any of several ways: a) an inspection is done by the manager or inspector, b) the appropriate local police officer(s) are asked to investigate and report back (if the complaint comes from a long distance from Saskatoon), c) further investigations are conducted by telephone.

At that point, if the complaint is a genuine one, a file is opened on that complaint, and further actions are taken as necessary to resolve the case and relieve the animal suffering. Usually, diplomatic negotiations result in a satisfactory, complete resolution. In other cases, animals are seized under the powers of the Saskatchewan Animal Protection Act, and the offender may be charged with cruelty to animals under the powers of section 402 of the Criminal Code of Canada. S.S.P.C.A. Inspectors then document the case, in co-operation with the local R.C.M. Police, testify in the court case, and assist the Attorney General's office in the presentation.

As well, routine inspections are done, as time and funding permits, of rodeos, auction marts, riding stables, stockyards, etc.

TERMS OF REFERENCE

The Review Committee shall:

i compare the level of veterinary service available to the level of veterinary service currently utilized by the Saskatchewan livestock industry; identify reasons for any discrepancy; evaluate the practical implications of shortfalls in veterinary service which may exist.

ii compare the level of technology development and transfer possible to the level of technology development and transfer currently utilized by the Saskatchewan livestock industry; identify reasons for any discrepancy; evaluate the practical implications of any technology transfer lag which may exist.

iii make recommendations on measures which can be taken by the government of Saskatchewan to improve veterinary services provided to the livestock industry of Saskatchewan.

iv make a final report to the Minister of Agriculture by March 31, 1986.

HISTORICAL PERSPECTIVE OF VETERINARY SERVICES IN SASKATCHEWAN

- Professional Resources

In 1909, sixty members were registered with the Saskatchewan Veterinary Medical Association.

In 1949, seventy-nine veterinarians were providing service to food animal producers.

In 1960, fifty-eight veterinarians were in private practice.

In 1971, fifty-six veterinarians were in food animal practice.

In 1985, one hundred and eight veterinarians were engaged in food animal practice.

- Rural Veterinary Delivery System

Prior to 1946, veterinary services to livestock producers were almost entirely single veterinarian, emergency service practices in widely scattered locations.

In 1946, The Veterinary Services District Act provided for one or more Rural Municipalities to form a Veterinary Services District. District municipalities jointly supported a travel grant for a veterinarian who would contract to provide veterinary services to District farmers based on an agreed fee schedule which would be uniform throughout the District. The Province of Saskatchewan matched the amount paid by the Veterinary Service District to a specified level which started at $1000 in 1946.

By 1950, thirty-eight Districts had been organized. The number of Districts increased to forty-five in 1970 and to fifty-five in 1985.

In 1985, approximately one third of the rural populated area of the Province was not within an organized Veterinary Service District.

- Veterinary Clinics

Starting in 1972, the Saskatchewan Department of Agriculture, with 50% federal cost sharing, offered a grant of $25,000 to each veterinary service district which constructed a clinic from which their district veterinarian would provide services. The province also matched operating grants paid by the Veterinary Service District to a maximum of $1000 per year. This provincial grant limit for maintenance was increased to $2000 in 1980.

By 1978, 30 publicly owned veterinary clinics had been constructed and 25 large animal clinics were privately owned. Publicly owned clinics increased to 32 in 1983. The title to publicly owned clinics is held by the Veterinary Service District Board.

In 1984, the grant structure was amended to the extent that veterinary clinics were required to be approved by the Saskatchewan Veterinary Medical Association before the operating grant was paid and the requirement for municipal matching of provincial grant funds were dropped.

Expenditures on Veterinary Clinics were $131,000 in 1984/85.

Beginning in 1981, an additional grant of $3000 was paid annually to multi-person practices to encourage this arrangement. Between 1981 and 1984, 15-17 grants were paid annually under this program.

- Diagnostic Services

Beginning in 1973/74, a grant of $107,000 was paid to the Western College of Veterinary Medicine to compensate the College for diagnostic services provided to the northern portion of the province. This annual grant increased gradually to $450,000 in 1985-86.

SASKATCHEWAN DEPARTMENT OF AGRICULTURE FINANCIAL INPUT INTO VETERINARY SERVICES AND ANIMAL HEALTH PROGRAMS

	1950		1970		1985	
	Real Dlrs	1981 Constant Dlrs	Real Dlrs	1981 Constant Dlrs	Real Dlrs	1981 Constant Dlrs
Provincial Admin and Program Services	$26,213	$104,020	$130,000	$317,073	$506,870	$415,633
Veterinary Service Districts	18,000	71,430	75,085	183,134	314,440	257,840
Veterinary Clinics	---		---		131,240	107,614
Diagnostic Services W.C.V.M.	---		---		450,000	369,000
Grants to S.P.C.A.	---		---		50,190	41,155
Poultry Health Grants	---		---		82,000	67,240
Meat Inspection	---		28,000	68,293	292,580	239,915
Swine Herd Health	---		---		40,000	32,800
Rabies Compensation	---		5,000	12,195	---	
TOTALS	$44,213	$175,450	$238,085	$580,695	$1,867,320	$1,531,117

Figures taken from 1983/84 public accounts

SASKATCHEWAN VETERINARY SERVICES REVIEW COMMITTEE

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The Saskatchewan Veterinary Services Review Committee wish to express their appreciation for the thorough and efficient manner in which secretarial functions were performed by Committee Secretary, Miss Terry Karwandy.

SOURCES OF INFORMATION AND CONSULTANTS

* Saskatchewan Veterinary Service Districts
* Saskatchewan Rural Municipalities not included in Veterinary Service Districts
* Producer Groups
  - Saskatchewan Pork Producers Marketing Board
  - Saskatchewan Cattle Feeders Association
  - National Farmers Union
  - Saskatchewan Stock Growers Association
  - Saskatchewan Sheep Breeders Association
  - Dairy Producers Cooperative Limited
  - The Saskatchewan Association of Rural Municipalities
  - Saskatchewan Hatchery Association
  - Saskatchewan Turkey Producers Marketing Board
  - Saskatchewan Chicken Marketing Board and Saskatchewan Broiler Hatching Egg Producers Marketing Board

* Provincial Veterinary Branches
  - Alberta Agriculture, Animal Health Division
  - New Brunswick Department of Agriculture and Rural Development
  - Newfoundland and Labrador Department of Rural, Agricultural and Northern Development
  - Prince Edward Island Department of Agriculture
  - Nova Scotia Department of Agriculture and Marketing
  - British Columbia Ministry of Agriculture and Food
  - Ministere de l'Agriculture, des Pecheries et de l'Alimentation du Quebec
  - Ontario Ministry of Agriculture and Food

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